

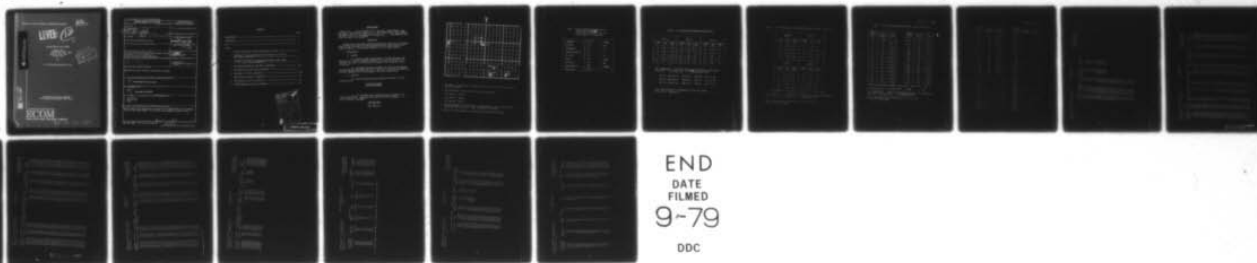
AD-A073 389 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
19304DT GSRS, MISSILE NUMBERS 1070 AND 1048, ROUND NUMBERS V-47--ETC(U)
JUN 79

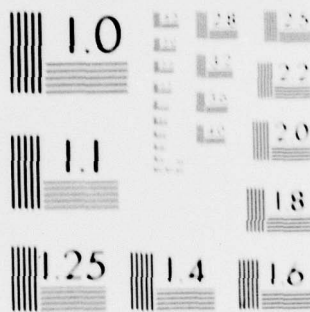
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DR 1038
JUNE 1979

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METEOROLOGICAL DATA REPORT

19304DT GSRS
Missile No. 1070, 1048
Round No. V-47 V-48
28 June 1979

by

White Sands Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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17. SUPPLEMENTARY NOTES 14 ERADCOM/ASL-DR-1038		
18. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind		
19. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304DT GSRS, Missile Numbers 1070 and 1048, Round Number V-47 and V-48, are presented in tabular form.		

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Unannounced	<input type="checkbox"/>
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INTRODUCTION

19304DT GSRS, Missile Numbers 1070 and 1048, Round Numbers V-47 and V-48, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0804 and 0804:02 MDT, 28 June 1979. The scheduled launch times were 0800 and 0800:02 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

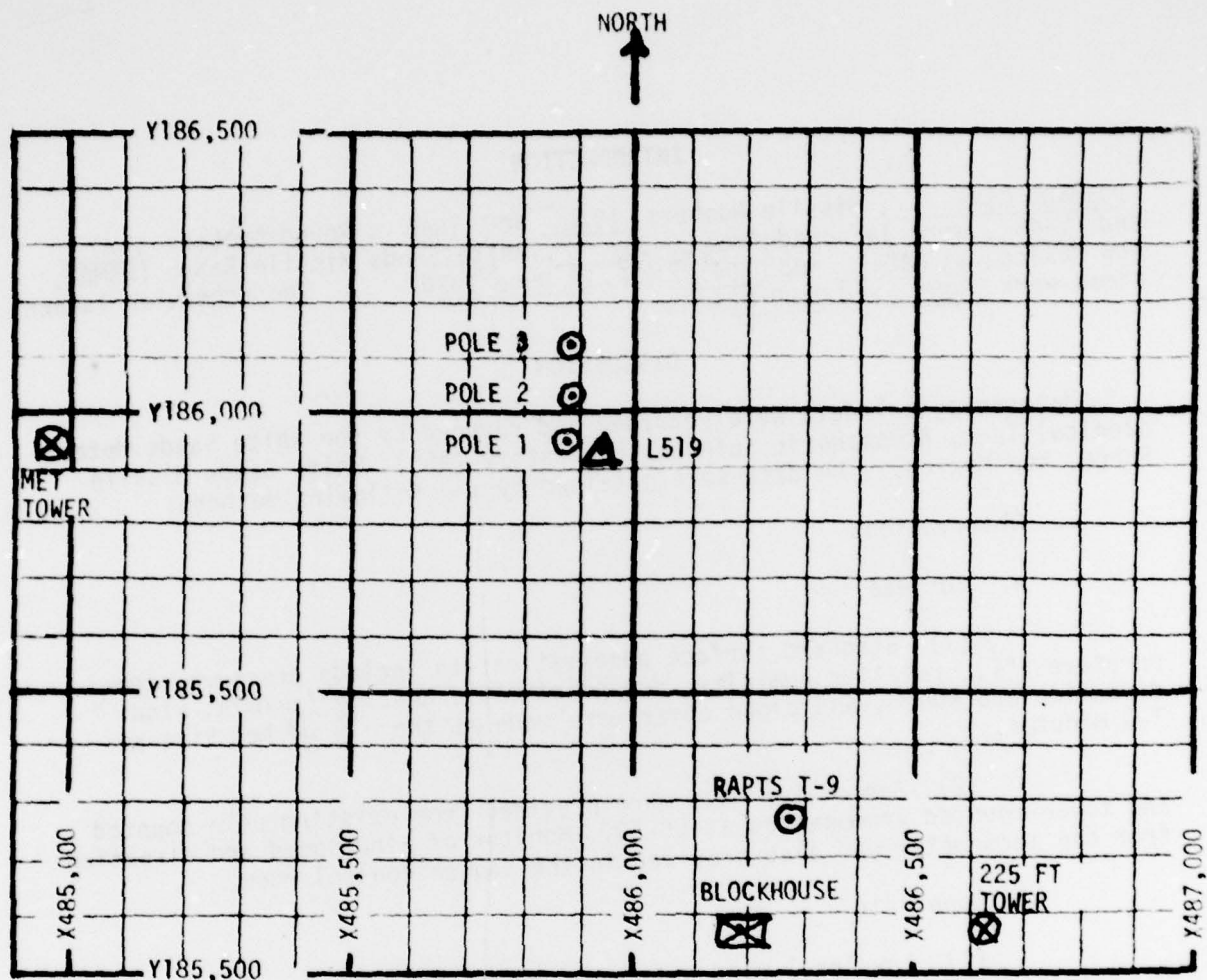
(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE
LC-33 1110 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 109,500 feet in 500-foot increments.

SITE AND TIME

SMR 0630 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
 - (a) Pole #1 - 38.7 ft
 - (b) Pole #2 - 53.0 ft
 - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar

TABLE 1. Surface observations taken at LC-33
 28 June 1979 at 0804 ~~MDT~~
 19304DT GSRS, Missile Nos. 1070 and
 1048, Round Nos. V-47 and V-48.

ELEVATION	3977.30	FT/MSL
PRESSURE	883.5	MBS
TEMPERATURE	23.9	°C
RELATIVE HUMIDITY	42	%
DEW POINT	10.0	°C
DENSITY	1029	GM/M ³
WIND SPEED	CALM	MPH
WIND DIRECTION	CALM	DEGREES
CLOUD COVER	CLEAR	

TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	140	miss.	-30	185	02	-30	143	01
-20	140	miss.	-20	185	01	-20	143	01
-10	140	miss.	-10	185	02	-10	000	00
0.0	139	miss.	0.0	185	03	0.0	143	01
+10	144	miss.	+10	185	02	+10	030	02

Type 19304DT GSRS, Missile No. 1070 & 1048, Round Noy-47 & V-48 launched
from LC-33 on 28 June 1979 at 0804 and 0804:02 MDT

POLE #1 = X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

NOTE: Wind directions are referenced to the firing azimuth _____
or true north true north.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	138	02
-20	000	00	-20	144	02
-10	000	00	-10	114	01
0.0	000	00	0.0	110	01
+10	000	00	+10	110	01
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	155	03
-20	000	00	-20	155	03
-10	159	01	-10	155	02
0.0	000	00	0.0	155	02
+10	000	00	+10	154	02

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19304DT GSRS , Missile No 1070 & 1048, Round No V-47 & V-48 launched
from LC-33 on 28 June 1979 at 0804 & 0804:02 MDT

NOTE: Wind directions are referenced to the firing azimuth _____
or true north true north.

TABLE 4. PILOT-BALLOON-MEASURED WIND DATA (30-METER INCREMENTS)

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
SFC	CALM	
30	175	01.0
60	175	02.4
90	175	03.5
120	175	04.7
150	175	05.9
180	175	07.1
210	175	08.3
240	175	09.5
270	175	10.6
300	175	11.8
330	175	13.0
360	176	13.5

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
390	178	13.1
420	181	12.7
450	184	12.3
480	187	12.0
510	191	11.7
540	194	11.5
570	198	11.3
600	201	11.2
630	205	11.1
660	209	11.0
690	211	10.3
720	212	09.6
750	214	08.9

Release Point Coordinates (WSTM): X486,037.24 Y486,037.24 H3977.30

Released from LC-33 on 28 June 1979 at 0804 MDT

Type 19304DT GSRS, Missile No. 1070 & 1048, Round No. V-47 & V-48 launched from LC-33 on 28 June 1979 at 0804 & 0804:02 MDT

NOTE: Wind directions are referenced to the firing azimuth or true north true north.

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
780	217	08.1
810	219	07.4
840	222	06.7
870	226	06.1
900	231	05.4
930	238	04.9
960	245	04.4
990	253	04.1
1020	260	04.2
1050	267	04.2
1080	274	04.3
1110	280	04.5
1140		
1170		
1200		
1230		
1260		
1290		
1320		
1350		
1380		
1410		

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
1440		
1470		
1500		
1530		
1560		
1590		
1620		
1650		
1680		
1710		
1740		
1770		
1800		
1830		
1860		
1890		
1920		
1950		
1980		
2010		
2040		
2070		

GEODETIC COORDINATES
32.46034 LAT DEG
106.42307 LONG DEG

SIGNIFICANT LEVEL DATA
1700000013
S 4 R

STATION ALTITUDE 2447.30 FEET MSL
28 JUL 79 0630 HRS MST
ASSUMPTION NO. 213

PRESSURE GEOMETRIC ALTITUDE MILLIBARS KSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
932.8	23.0	38.0
850.0	24.1	36.0
826.0	23.7	34.0
817.0	24.4	31.0
700.0	14.5	37.0
650.0	11.2	42.0
634.6	9.2	38.0
571.7	5.5	39.0
543.6	-2.6	54.0
508.5	-7.3	42.0
500.0	-6.6	18.0
424.4	-16.3	14.0
400.0	-18.8	13.0
377.4	-21.1	14.0
321.0	-30.9	15.0
315.0	-30.9	
309.2	-32.3	
300.0	-33.9	
250.0	-43.9	
200.0	-54.0	
180.4	-59.0	
150.0	-65.1	
117.4	-69.5	
100.0	-70.4	
80.0	-70.0	
70.0	-61.7	
62.6	-56.5	
50.0	-50.0	
45.6	-55.4	
31.2	-53.5	
30.0	-50.5	
20.0	-45.0	
13.4	-43.0	
10.0	-37.7	
7.8	-34.8	

STATION ALTITUDE 397.30 FEET MSL
28 JUL 79 0630 HRS MST
ASCENSION NO. 213

UPPER AIR DATA
1790060210
S M R

GEODETTIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY G/M ³ CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (T)	WIND SPEED KNOTS	INDEX OF REFRACTION
397.3	882.8	23.0	38.0	1033.7	672.0	.0	.0	1.000277
4000.0	882.7	23.0	38.0	1033.8	672.0	176.5	.0	1.000277
4500.0	867.5	23.5	37.1	1013.9	672.0	170.5	1.5	1.000272
5000.0	852.5	24.0	36.2	994.5	673.2	170.5	2.9	1.000268
5500.0	837.7	23.9	35.0	977.9	673.0	170.5	4.4	1.000262
6000.0	823.5	23.9	33.0	961.0	673.0	170.5	5.8	1.000256
6500.0	808.9	23.8	31.4	945.0	672.7	212.3	3.7	1.000250
7000.0	794.8	22.6	32.1	932.1	671.4	209.3	4.5	1.000246
7500.0	780.8	21.5	32.8	919.4	670.1	273.0	5.8	1.000242
8000.0	767.1	20.4	33.4	905.9	669.3	280.0	6.8	1.000237
8500.0	753.7	19.2	34.1	894.0	667.4	290.9	7.4	1.000233
9000.0	740.5	18.1	34.8	882.4	666.1	310.7	7.9	1.000229
9500.0	727.5	17.0	35.5	870.4	664.7	323.4	8.5	1.000225
10000.0	714.7	15.8	36.2	858.6	663.4	330.4	8.8	1.000221
10500.0	702.2	14.7	36.3	847.0	662.1	348.0	9.3	1.000217
11000.0	689.6	13.7	38.3	834.9	660.9	359.6	10.2	1.000214
11500.0	677.5	12.6	39.8	822.8	659.7	3.0	11.2	1.000210
12000.0	665.1	11.0	41.3	811.0	658.5	9.8	11.1	1.000207
12500.0	653.1	10.4	39.3	800.1	655.9	17.0	11.1	1.000202
13000.0	641.5	9.0	34.7	789.9	655.2	27.1	11.3	1.000195
13500.0	629.5	7.0	34.1	779.4	653.5	30.2	11.7	1.000191
14000.0	617.9	6.2	38.9	768.7	651.9	41.4	12.3	1.000189
14500.0	606.4	4.9	43.7	758.1	650.3	43.4	13.0	1.000187
15000.0	595.2	3.5	48.6	747.6	648.7	51.9	13.7	1.000185
15500.0	584.2	2.1	53.4	737.6	647.1	58.3	14.6	1.000183
16000.0	573.4	.7	58.2	727.6	645.5	59.0	16.4	1.000181
16500.0	562.6	.5	57.4	717.2	644.0	59.8	17.9	1.000177
17000.0	552.0	-1.7	55.5	706.9	642.0	59.0	19.2	1.000173
17500.0	541.6	-2.9	54.4	696.6	641.1	59.5	19.5	1.000169
18000.0	531.2	-4.4	56.8	687.2	639.4	61.3	19.1	1.000165
18500.0	521.0	-5.9	59.1	678.0	637.4	65.3	18.6	1.000163
19000.0	511.0	-7.4	61.4	668.9	635.0	70.0	18.1	1.000161
19500.0	501.2	-9.8	24.2	659.0	630.0	75.0	17.4	1.000151
20000.0	491.4	-7.7	17.6	649.4	634.9	79.0	16.5	1.000147
20500.0	481.7	-6.8	17.1	639.7	633.5	81.0	15.2	1.000144
21000.0	472.5	-10.0	16.6	629.1	632.0	83.0	13.7	1.000142
21500.0	463.0	-11.2	16.1	618.6	630.0	83.1	11.6	1.000139
22000.0	453.9	-12.4	15.0	608.3	629.1	83.2	9.5	1.000137
22500.0	445.0	-13.0	15.2	597.2	627.7	83.8	8.4	1.000135
23000.0	435.5	-14.8	14.7	586.2	626.2	90.1	6.4	1.000133

GEODETIC COORDINATES
32.4834 LAT DEG
106.42307 LON DEG

UPPER AIR DATA
1790060213
S M R

STATION ALTITUDE 3997.30 FEET MSL
28 JUNE 79 0630 HRS MST
ASCENSION NO. 213

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GW/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.7	-16.0	-37.1	14.2	579.3	624.7	91.0	10.5	1.000130
24000.0	419.2	-17.0	-38.2	13.8	569.9	623.5	93.4	11.0	1.000128
24500.0	410.7	-17.8	-39.1	13.4	560.2	622.5	100.4	10.2	1.000126
25000.0	402.5	-18.6	-40.0	13.1	550.6	621.7	110.5	9.7	1.000124
25500.0	394.4	-19.4	-40.5	13.2	541.2	620.7	124.0	9.7	1.000122
26000.0	386.4	-20.2	-40.9	13.6	531.9	619.7	135.9	10.5	1.000119
26500.0	378.5	-21.0	-41.4	13.9	522.8	618.7	144.9	11.9	1.000117
27000.0	370.7	-22.2	-42.2	14.1	514.5	617.2	151.3	13.4	1.000115
27500.0	363.0	-23.5	-43.2	14.2	506.4	615.6	159.1	14.9	1.000114
28000.0	355.5	-24.7	-44.2	14.4	498.4	614.1	160.4	15.3	1.000112
28500.0	348.1	-26.0	-45.1	14.5	490.6	612.5	164.8	15.4	1.000110
29000.0	340.8	-27.3	-46.1	14.6	482.9	610.9	168.6	14.6	1.000108
29500.0	333.8	-28.5	-47.1	14.8	475.3	609.3	172.6	13.8	1.000106
30000.0	326.8	-29.8	-48.1	14.9	467.9	607.7	170.2	12.2	1.000105
30500.0	320.0	-30.9	-50.4	12.6**	460.2	605.4	167.2	10.5	1.000103
31000.0	313.3	-31.3			451.3	603.8	171.2	8.4	1.000101
31500.0	306.6	-32.3			444.3	604.0	179.1	6.4	1.000099
32000.0	300.0	-33.9			436.9	602.6	212.4	6.1	1.000097
32500.0	293.5	-35.1			429.5	601.1	233.2	7.8	1.000096
33000.0	287.0	-36.3			422.2	599.5	243.6	11.6	1.000094
33500.0	280.8	-37.5			415.1	599.0	253.3	15.6	1.000092
34000.0	274.6	-38.7			408.1	596.5	264.6	19.4	1.000091
34500.0	268.6	-40.0			401.3	594.9	253.5	22.8	1.000089
35000.0	262.7	-41.2			394.6	593.4	259.1	22.7	1.000088
35500.0	257.0	-42.4			387.9	591.8	253.0	22.7	1.000086
36000.0	251.4	-43.6			381.5	590.2	253.3	21.6	1.000085
36500.0	245.7	-44.7			374.6	588.6	253.7	20.4	1.000083
37000.0	240.1	-45.7			367.7	587.5	257.6	19.4	1.000082
37500.0	234.6	-46.8			361.0	586.1	259.6	18.5	1.000080
38000.0	229.2	-47.8			354.4	584.6	260.9	18.8	1.000079
38500.0	224.0	-48.9			347.9	583.4	261.9	19.0	1.000077
39000.0	218.9	-49.9			341.6	582.1	262.0	18.9	1.000076
39500.0	213.9	-51.0			335.3	580.7	262.5	18.2	1.000075
40000.0	209.0	-52.0			329.2	579.3	264.0	16.4	1.000073
40500.0	204.2	-53.1			323.2	578.0	265.1	14.7	1.000072
41000.0	199.5	-54.1			317.3	576.5	265.9	13.6	1.000071
41500.0	194.8	-55.3			311.5	575.0	262.4	12.6	1.000069
42000.0	190.2	-56.4			305.6	573.5	264.4	12.3	1.000068
42500.0	185.7	-57.6			300.1	572.0	247.2	14.2	1.000067
43000.0	181.3	-58.8			294.6	570.4	247.0	16.6	1.000066

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
28 JUNE 79
ASCENSION NO. 213

UPPER AIR DATA
1790060213
S M R

GEODETIC COORDINATES
22°48034 LAT DEG
106°42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	177.0	-59.6			286.7	509.3	247.0	19.3	1.000064
44000.0	172.7	-60.4			282.8	560.2	255.0	20.2	1.000063
44500.0	168.5	-61.3			277.0	567.1	264.1	21.3	1.000062
45000.0	164.4	-62.1			271.3	568.0	271.5	19.8	1.000060
45500.0	160.4	-62.9			265.0	563.8	279.9	18.7	1.000059
46000.0	156.5	-63.7			260.3	563.8	280.2	15.2	1.000058
46500.0	152.7	-64.5			255.0	562.7	290.5	10.9	1.000057
47000.0	149.0	-65.2			249.7	561.8	302.3	7.5	1.000056
47500.0	145.3	-65.7			244.0	561.2	299.1	4.4	1.000054
48000.0	141.7	-66.1			238.4	560.5	294.4	2.7	1.000053
48500.0	138.2	-66.6			232.0	559.9	284.0	4.4	1.000052
49000.0	134.8	-67.0			227.7	559.3	213.5	6.5	1.000051
49500.0	131.4	-67.5			222.0	558.7	211.1	7.9	1.000050
50000.0	128.1	-67.9			217.5	558.1	205.3	9.3	1.000048
50500.0	125.0	-68.4			212.0	557.5	203.4	9.9	1.000047
51000.0	121.9	-68.8			207.6	556.9	200.4	10.6	1.000046
51500.0	118.8	-69.3			202.1	556.3	197.5	6.7	1.000045
52000.0	115.9	-69.6			196.5	555.9	191.4	6.7	1.000044
52500.0	113.0	-69.7			192.4	555.7	189.7	5.3	1.000043
53000.0	110.1	-69.9			188.7	555.5	191.2	4.3	1.000042
53500.0	107.5	-70.0			184.1	555.3	200.9	3.9	1.000041
54000.0	104.8	-70.1			179.6	555.1	200.7	5.0	1.000040
54500.0	102.0	-70.3			175.2	554.9	240.1	5.5	1.000039
55000.0	99.5	-70.4			170.9	554.7	244.3	3.9	1.000038
55500.0	96.9	-70.4			166.5	554.5	353.7	5.5	1.000037
56000.0	94.5	-70.3			162.2	554.3	20.0	6.8	1.000036
56500.0	92.1	-70.3			158.2	554.9	41.7	10.1	1.000035
57000.0	89.8	-70.2			154.2	555.0	59.0	11.6	1.000034
57500.0	87.6	-70.2			150.3	555.0	73.9	13.7	1.000033
58000.0	85.4	-70.1			146.4	555.1	80.0	13.1	1.000033
58500.0	83.2	-70.1			142.7	555.2	89.1	9.3	1.000032
59000.0	81.1	-70.0			139.1	555.2	93.0	5.8	1.000031
59500.0	79.1	-69.9			135.1	555.2	51.0	3.8	1.000030
60000.0	77.1	-69.7			130.8	555.4	4.3	4.0	1.000029
60500.0	75.2	-69.2			126.5	550.5	35.0	6.0	1.000028
61000.0	73.4	-68.6			122.0	552.0	43.0	10.3	1.000027
61500.0	71.6	-68.1			118.7	554.0	50.9	10.0	1.000026
62000.0	69.8	-67.6			115.0	556.0	50.0	7.9	1.000026
62500.0	68.1	-67.0			111.4	557.5	54.4	6.5	1.000025
63000.0	66.5	-66.2			108.8	560.3	55.0	6.2	1.000024

THIS DATA IS BEST QUALITY PRACTICABLE
FROM COPY FURNISHED TO DDG

GEODETIC COORDINATES
 32.42034 LAT DEG
 106.42307 LONG DEG

UPPER AIR DATA
 1790060213
 S M R

STATION ALTITUDE 3997.30 FEET MSL
 28 JUNE 79 0530 HRS MST
 ASCENSION NO. 213

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY G/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, SPEED DEGREES (M) KNOTS	INDEX OF REFRACTION
6350.0	64.9	-59.5		105.9	569.7	09.5	1.000024
6400.0	63.4	-58.8		103.0	570.3	67.1	1.000023
6450.0	61.8	-58.5		100.4	570.7	03.0	1.000022
6500.0	60.4	-58.6		98.0	570.7	03.0	1.000022
6550.0	58.9	-58.6		95.7	570.6	70.6	1.000021
6600.0	57.5	-58.7		93.5	570.5	70.3	1.000021
6650.0	56.2	-58.7		91.3	570.4	74.3	1.000020
6700.0	54.8	-58.8		89.1	570.4	71.7	1.000020
6750.0	53.5	-58.9		87.0	570.3	72.4	1.000019
6800.0	52.2	-58.9		85.0	570.2	77.7	1.000019
6850.0	51.0	-59.0		83.0	570.2	02.2	1.000018
6900.0	49.8	-58.6		80.9	570.3	91.0	1.000018
6950.0	48.6	-57.9		78.7	571.0	102.4	1.000018
7000.0	47.5	-57.0		76.5	572.0	106.8	1.000017
7050.0	46.3	-56.0		74.4	574.0	97.0	1.000017
7100.0	45.3	-55.4		72.4	574.9	90.4	1.000016
7150.0	44.2	-55.2		70.7	575.1	67.5	1.000016
7200.0	43.2	-55.1		69.0	575.2	80.0	1.000015
7250.0	42.2	-55.0		67.3	575.4	84.0	1.000015
7300.0	41.2	-54.9		65.7	575.6	85.2	1.000015
7350.0	40.2	-54.6		64.1	575.7	63.6	1.000014
7400.0	39.3	-54.7		62.6	575.9	60.1	1.000014
7450.0	38.4	-54.5		61.1	576.0	86.7	1.000014
7500.0	37.5	-54.4		59.7	576.2	87.3	1.000013
7550.0	36.6	-54.3		58.2	576.3	87.0	1.000013
7600.0	35.7	-54.2		56.9	576.5	87.7	1.000013
7650.0	34.9	-54.1		55.5	576.6	87.0	1.000012
7700.0	34.1	-53.9		54.2	576.8	83.2	1.000012
7750.0	33.3	-53.8		52.9	577.0	83.0	1.000012
7800.0	32.5	-53.7		51.6	577.1	82.0	1.000011
7850.0	31.8	-53.6		50.4	577.3	91.9	1.000011
7900.0	31.0	-53.1		49.1	578.0	93.4	1.000011
7950.0	30.3	-51.3		47.0	580.3	99.2	1.000011
8000.0	29.5	-50.3		45.3	581.5	99.0	1.000010
8050.0	28.9	-49.7		43.9	582.3	99.9	1.000010
8100.0	28.3	-49.4		42.5	582.5	100.2	1.000010
8150.0	27.6	-49.4		41.0	582.9	97.0	1.000010
8200.0	27.0	-49.1		40.0	583.2	95.7	1.000009
8250.0	26.4	-48.6		40.0	583.0	97.0	1.000009
8300.0	25.8	-48.5		40.0	584.0	95.5	1.000009

GEODETIC COORDINATES
32.4834 LAT DEG
106.42307 LON DEG

UPPER AIR DATA
170000Z0213
S M R

STATION ALTITUDE 3497.30 FEET MSL
28 JUNE 79 0630 HRS MST
ASCENSION NO. 213

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES(T.I.)	SPEED KNOTS	INDEX OF REFRACTION
8350.0	25.2	-48.1		39.1	594.4	95.1	20.9	1.000009
8400.0	24.7	-47.8		38.1	594.8	93.9	20.6	1.000008
8450.0	24.1	-47.5		37.2	595.2	92.1	20.9	1.000008
8500.0	23.6	-47.2		36.3	595.6	90.5	21.3	1.000009
8550.0	23.0	-46.9		35.4	595.0	89.1	21.8	1.000008
8600.0	22.5	-46.6		34.5	595.4	86.0	23.1	1.000008
8650.0	22.0	-46.3		33.6	595.8	83.0	25.3	1.000008
8700.0	21.5	-46.0		32.7	597.2	81.0	27.5	1.000007
8750.0	21.0	-45.7		32.2	597.6	79.1	29.8	1.000007
8800.0	20.5	-45.4		31.4	598.0	76.9	31.5	1.000007
8850.0	20.1	-45.0		30.9	598.4	73.6	33.3	1.000007
8900.0	19.6	-44.9		29.9	598.9	70.4	35.0	1.000007
8950.0	19.2	-44.6		29.3	599.7	70.4	35.6	1.000007
9000.0	18.8	-44.7		28.5	599.8	70.4	35.7	1.000006
9050.0	18.3	-44.6		27.5	599.1	70.5	35.8	1.000006
9100.0	17.9	-44.5		26.7	599.3	70.5	35.9	1.000006
9150.0	17.5	-44.4		26.1	599.4	70.1	36.6	1.000006
9200.0	17.1	-44.3		25.5	599.5	70.0	37.0	1.000006
9250.0	16.8	-44.1		24.9	599.7	70.4	37.3	1.000006
9300.0	16.4	-44.0		24.4	599.8	70.1	37.6	1.000005
9350.0	16.0	-43.9		23.8	599.9	70.7	37.9	1.000005
9400.0	15.7	-43.8		23.3	599.1	70.3	38.2	1.000005
9450.0	15.3	-43.7		22.7	599.2	70.9	38.9	1.000005
9500.0	15.0	-43.6		22.2	599.4	70.9	39.6	1.000005
9550.0	14.6	-43.5		21.7	599.5	70.7	40.2	1.000005
9600.0	14.3	-43.4		21.2	599.7	70.7	39.9	1.000005
9650.0	14.0	-43.3		20.7	599.8	70.0	39.4	1.000005
9700.0	13.7	-43.2		20.3	599.9	70.2	38.9	1.000005
9750.0	13.4	-43.1		19.9	599.9	70.5	38.5	1.000004
9800.0	13.1	-42.8		19.3	599.9	70.0	38.0	1.000004
9850.0	12.8	-42.4		18.9	599.9	70.0	38.2	1.000004
9900.0	12.5	-42.0		18.4	599.8	70.0	38.0	1.000004
9950.0	12.2	-41.6		17.6	599.9	70.0	38.0	1.000004
10000.0	12.0	-41.1		17.0	599.9	70.0	40.0	1.000004
10050.0	11.7	-40.7		17.1	599.9	70.0	40.3	1.000004
10100.0	11.5	-40.3		16.7	599.9	70.0	40.4	1.000004
10150.0	11.2	-39.9		16.0	599.9	70.0	40.2	1.000004
10200.0	11.0	-39.5		15.6	599.9	70.0	40.1	1.000004
10250.0	10.7	-39.0		15.6	599.9	70.0	40.1	1.000003
10300.0	10.5	-38.5		15.6	599.9	70.0	40.1	1.000003

STATION ALTITUDE 3497.30 FEET MSL
28 JUNE 79 0630 HRS MST
ASCENSION NO. 213

UPPER AIR DATA
1790060213
S M R

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KILOTS	WIND DATA DIRECTION, DEGREES (T)	SPEED KILOTS	INDEX OF REFRACTION
103500.0	10.3	-36.2		15.2	597.2	91.7	40.0	1.000003
104000.0	10.0	-37.8		14.9	597.7	92.9	39.8	1.000003
104500.0	9.8	-37.5		14.5	598.1	94.1	39.6	1.000003
105000.0	9.6	-37.2		14.2	598.4	95.3	39.5	1.000003
105500.0	9.4	-37.0		13.9	598.7	95.5	39.4	1.000003
106000.0	9.2	-36.7		13.6	599.0			1.000003
106500.0	9.0	-36.5		13.3	599.3			1.000003
107000.0	8.8	-36.2		13.0	599.7			1.000003
107500.0	8.6	-36.0		12.7	600.0			1.000003
108000.0	8.4	-35.7		12.4	600.3			1.000003
108500.0	8.3	-35.5		12.1	600.6			1.000003
109000.0	8.1	-35.2		11.8	600.9			1.000003
109500.0	7.9	-35.0		11.6	601.3			1.000003

STATION ALTITUDE 3997.30 FEET MSL
 28 JUNE 79 0630 HRS MST
 ASCENSION NO. 213

MRN SIGNIFICANT LEVEL DATA
 1790060215
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA		E-W MPS	DEW PT DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
		SPEED MPS	N-S MPS				
3326.	9999.**	9999.**	-9999.**	-9999.**	99	-34.8	7.800+0
3155.	93.	20.	1.	-20.	99	-37.7	1.000+1
2966.	79.	20.	-4.	-19.	99	-43.0	1.320+1
2867.	79.	17.	-3.	-17.	99	-45.0	2.000+1
2419.	99.	11.	2.	-11.	99	-50.5	3.000+1
2394.	94.	12.	1.	-12.	99	-53.5	3.120+1
2151.	93.	11.	0.	-11.	99	-55.4	4.560+1
2092.	90.	8.	-0.	-8.	99	-59.0	5.000+1
1951.	66.	5.	-2.	-5.	99	-58.5	6.260+1
1882.	58.	4.	-2.	-4.	99	-61.7	7.000+1
1801.	69.	2.	-1.	-2.	99	-70.0	8.000+1
1668.	282.	2.	-0.	2.	99	-70.4	1.000+2

** WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET AMSL
28 JUNE 79 0630 HRS MST
ASCENSION NO. 215

MANDATORY LEVELS
1790000215
S W R

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.	WIND DATA		
MILLIBARS	FEET	AIR	DEWPOINT	PERCENT	DIRECTION	SPEED	
		DEGREES	CENTIGRADE		DEGREES (TN)	KNOTS	
850.0	5079.	24.1	8.1	36.	176.5	3.2	
800.0	6817.	23.1	5.4	32.	255.4	3.8	
750.0	8649.	18.9	2.9	34.	301.2	7.7	
700.0	10578.	14.5	.0	37.	350.7	9.5	
650.0	12618.	10.0	-3.6	38.	19.5	11.1	
600.0	14778.	4.1	-6.4	47.	49.6	13.4	
550.0	17075.	-1.9	-9.7	55.	56.8	19.4	
500.0	19533.	-6.6	-26.9	16.	75.6	17.3	
450.0	22201.	-13.0	-33.8	15.	84.3	9.5	
400.0	25110.	-18.8	-40.2	15.	114.3	9.6	
350.0	28335.	-25.7	-44.9	14.	163.7	15.4	
300.0	31918.	-33.9			211.5	6.1	
250.0	36042.	-43.9			255.3	21.3	
200.0	40850.	-54.0			264.1	13.8	
175.0	43621.	-60.0			250.7	19.8	
150.0	46741.	-65.1			302.8	6.4	
125.0	50357.	-68.4			203.5	9.9	
100.0	54721.	-70.4			278.9	4.0	
80.0	59073.	-70.0			71.2	4.7	
70.0	61733.	-61.7			57.8	8.2	
60.0	64876.	-58.6			67.5	14.9	
50.0	68651.	-59.0			69.2	15.9	
40.0	73309.	-54.7			65.7	20.0	
30.0	79372.	-50.5			99.5	22.2	
25.0	83295.	-48.0			94.7	20.8	
20.0	88155.	-45.0			78.5	33.4	
15.0	94481.	-43.6			80.5	38.8	
10.0	103516.	-37.7			93.0	39.8	

STATION ALTITUDE 3997.30 FEET MSL
 28 JUNE 79
 ASCENSION NO. 213

MRN MANDATORY LEVELS
 1790060213
 S M R

GEODETIC COORDINATES
 32.448034 LAT DEG
 106.442307 LONG DEG

GEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	SPEED MPS	WIND DATA N-S MPS	E-W MPS	DEW PT DEP DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3155.	93.	20.	1.	-20.	99	-37.7	1.000+1
2880.	81.	20.	-3.	-20.	99	-43.6	1.500+1
2687.	79.	17.	-3.	-17.	99	-45.0	2.000+1
2539.	95.	11.	1.	-11.	99	-48.0	2.500+1
2419.	99.	11.	2.	-11.	99	-50.5	3.000+1
2434.	86.	10.	-1.	-10.	99	-54.7	4.000+1
2092.	69.	8.	-0.	-0.	99	-59.0	5.000+1
1978.	67.	7.	-2.	-0.	99	-58.6	6.000+1
1882.	58.	4.	-2.	-4.	99	-61.7	7.000+1
1801.	71.	2.	-1.	-2.	99	-70.0	8.000+1
1668.	279.	2.	-0.	2.	99	-70.4	1.000+2
1535.	203.	5.	5.	2.	99	-66.4	1.250+2
1425.	303.	4.	-2.	4.	99	-63.1	1.500+2
1330.	251.	10.	3.	10.	99	-60.0	1.750+2
1245.	264.	7.	1.	7.	99	-54.0	2.000+2
1099.	255.	11.	3.	11.	99	-43.9	2.500+2
973.	212.	3.	3.	2.	99	-33.9	3.000+2
864.	164.	8.	6.	-2.	19	-25.7	3.500+2
765.	114.	5.	2.	-3.	21	-18.8	4.000+2
677.	85.	5.	-0.	-5.	21	-13.0	4.500+2
595.	76.	9.	-2.	-9.	20	-6.6	5.000+2
520.	59.	10.	-5.	-9.	09	-1.9	5.500+2
450.	50.	7.	-4.	-5.	10	4.1	6.000+2
385.	20.	6.	-5.	-2.	11	10.0	6.500+2
322.	351.	5.	-5.	1.	14	14.5	7.000+2
264.	301.	4.	-2.	3.	15	18.9	7.500+2
208.	255.	2.	0.	2.	16	23.1	8.000+2
155.	177.	2.	2.	-0.	16	24.1	8.500+2